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Forest Insect Survey
CLEARWATER NATIONAL FOREST
AND
CLEARWATER TIMBER PROTECTIVE ASSOCIATION
1941

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FOREST INSECT SURVEY
CLEARWATER NATIONAL FOREST
AND
CLEARWATER TIMBER PROTECTIVE ASSOCIATION
1941

by
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During the latter part of August 1941 a survey was made in parts of the mature timber stands of the Clearwater National Forest and of the privately and state-owned stands of the Clearwater Timber Protective Association to determine the extent of the mountain pine beetle infestation.

A similar survey was made in 1940, but the work on some of the units was not completed and in others the data obtained warranted further work during the 1941 season.

The following table will give the 1940 and 1941 data on the units surveyed during 1941:

Units surveyed	Acres	Infested trees per acre		Percent of stand killed		Infested trees	
		1940	1941	1940	1941	1940	1941
CLEARWATER NATIONAL FOREST							
Sheep Mountain	2,880	.23	.25	.3	.4	662	720
Tepee Creek	1,280	.10	.11	.15	.3	128	141
CLEARWATER TIMBER PROTECTIVE ASSOCIATION							
Tepee Creek	640	.16	.0	.3	.0	102	0
Orogrande (LPP)	3,720	1.7	.73	No data	2.9	6,324	2,716
Alder Creek	13,000	.08	.10	.1	.3	1,040	1,300
Silver Creek	15,000	No data	.09		.3		1,350
Thompson Creek	1,700	.09	.12	.1	.3	153	204
Benton Creek	6,700	No data	.0		.0		0
Butte Creek	4,800	No data	.13		.4		624
Canal Gulch	1,000	No data	.07		.3		70

An analysis of each unit surveyed will show a slight increase in the infestation in the white pine stands over comparable data of 1940. However, the increase is so small as to be unimportant.

UNITS OF THE CLEARWATER NATIONAL FOREST

Sheep Mountain Unit 2,880 acres

Infested trees per acre	.25
Percent of stand killed	.4
Infested trees on unit	720

This unit has been surveyed annually since 1938, when a serious infestation in the epidemic stage was recorded. Control measures were undertaken in the spring of 1939, and 2,044 infested trees were treated in the Sheep Mountain unit. In the fall of 1939 a check survey was made of the unit, which showed that the infestation had dropped from .7 of an infested tree per acre to .29. Again, in 1940, sample plot data were taken which gave an infestation-per-acre figure of .23.

During the survey of 1941, 481 sample plots were taken and the data obtained show an infestation of .25 of an infested tree per acre. The infestation does not show much change from that of last year. A few small groups of infested trees are present as well as scattered singles, but it is the writer's opinion that the infestation is somewhat lower than the data indicate.

Tepee Creek Unit 1,280 acres

Infested trees per acre	.11
Percent of stand killed	.3
Infested trees on unit	128

Insect control measures were also applied to the infestation in the Tepee Creek unit during the spring of 1939. The infestation decreased about 50 percent following the control operations to .19 infested trees per acre. A further reduction occurred in 1940, when the infestation dropped to .10. The present infestation is virtually the same as in 1940. There is, however, a discrepancy shown in table 1 in the percentages of the stand killed during the two seasons. The reason for this is that a smaller number of green pine occurred on the sample plots taken in 1941 than there were in 1940. The infestation is not doing any serious damage and will probably remain in a more or less inactive status for some time.

CLEARWATER TIMBER PROTECTIVE ASSOCIATION

The following units are in timber stands that are under the administration of the Clearwater Timber Protective Association:

Tepee Creek Unit 640 acres

Infested trees per acre	0

Although the data taken on this small area on the western side of Tepee Creek showed no infestation, there are undoubtedly a few infested trees present. The portion of Tepee Creek on the national forest showed an infestation of .11 of an infested tree per acre, and about the same condition is thought to prevail on the area under

C.T.P.A. jurisdiction. No infested trees were found on 54 sample plots, however, and it is entirely possible that only a very few infested trees are present.

Orogrande Unit (lodgepole pine) 3,720 acres

Infested trees per acre	.73
Percent of stand killed	2.9
Infested trees on unit	2,716

The entire Orogrande unit of 12,000 acres was surveyed in 1940. The data taken showed that a very light infestation existed in the white pine stands. However, on an area of 3,720 acres in the West Elk, Crystal and Silver Creek drainages, north of the old Oxford road, a very severe mountain pine beetle infestation was recorded in the lodgepole pine stands. The infestation occurred in large groups and averaged 1.7 infested tree per acre. The lodgepole pine was mixed with a good stand of white pine and some concern was felt because it was thought that the insects might spread into the white pine.

A survey of the area was again made in 1941, and 370 sample plots were taken. The data secured showed an infestation of .73 of an infested tree per acre. The infested lodgepole occur in rather large groups of 10 to 15 infested trees, but the insects seem to prefer the lodgepole and as yet are not infesting the white pine.

In this area, although the lodgepole pine predominates along the wide flat streams and to a lesser extent along the sides of the low ridges, the stand is about evenly divided between lodgepole pine and white pine. The mountain pine beetle has been active in the area for a number of years, but has not infested the white pine to any serious

extent. During 1940 an infestation of .067 of an infested white pine per acre was recorded and in 1941 the per-acre figure was .03. These data show a substantial decrease in the infestation which may eventually die cut when the preferred host is exhausted.

Alder Creek Unit — 13,000 acres

Infested trees per acre	.10
Percent of stand killed	.3
Infested trees on unit	1,300

A partial survey was made in the Alder Creek drainage in 1940, but the data obtained were inadequate. A more thorough survey was made during the 1941 season, when a total of 1,133 sample plots were taken. Data obtained from these plots show a moderate amount of infestation but not a serious one. A small area in the vicinity of the Alder Creek bridge has a considerable amount of elder kill, but a rather thorough examination was made in the locality and only two infested trees were found.

Silver Creek Unit — 15,000 acres

Infested trees per acre	.09
Percent of stand killed	.3
Infested trees on unit	1,350

A limited number of sample plots were taken along the Silver Creek road in 1940, and data from these plots showed an infestation of .24 of an infested tree per acre. However, the data obtained at that time are hardly comparable to the more thorough coverage made in the past season. During the 1941 survey 1,236 sample plots were examined

from all parts of the drainage. The infestation in the Silver Creek drainage is very much the same as the infestation in the Alder Creek unit, which lies adjacent to the south. Although the infested trees are to be found scattered throughout the drainage, they seem to be slightly more numerous in sections 20 and 21, which lie just north of Bear Butte.

Although the mountain pine beetle infestation in the white pine stands of the unit is not serious at this time, there is a rather severe epidemic of the Douglas fir beetle in the Douglas fir stands along the higher ridges north of the Silver Creek road. Groups of 8 and 10 infested fir were examined. There is, however, a relatively small amount of Douglas fir in the area and for that reason it is felt that the infestation is not important.

Thompson Creek Unit 1,700 acres

Infested trees per acre	.12
Percent of stand killed	.3
Infested trees on unit	204

A very extensive examination, which included a limited amount of sampling, was made in this drainage in 1940. The data obtained indicated a light infestation of .09 infested trees per acre. A more thorough coverage was made this year and a representative sample was taken. No very serious insect losses are occurring in the white pine stands at this time. There are a limited number of scattered infested trees in the drainage, but it is felt that the infestation is not above normal considering the very dense stocking of the stand.

Along the higher ridges where there is a mixed Douglas fir stand, the fir is infested by the Douglas fir beetle, and some rather large groups of infested trees were examined.

Benton Creek Unit 6,700 acres

Infested trees per acre 0

No infested trees were found on 270 sample plots examined in this area. However, a few faded topped trees were observed, which would indicate that there is probably a light infestation in the pine in this area.

For the past two years there has been a noticeable insect kill in the Douglas fir stands along the north side of Benton Creek. The red-topped trees, however, do not appear to be as numerous this season as they were in 1940.

Butte Creek Unit 4,800 acres

Infested trees per acre	.13
Percent of stand killed	.4
Infested trees on unit	624

Although the infestation in the whole Butte Creek drainage is not very heavy, a small area of severe infestation was recorded in a portion of the drainage. This area of infestation is limited to parts of two sections (8 and 17) along the eastern side of Butte Creek. The area contains about 800 acres and extends from Butte Creek east to the top of the Butte Creek-Thompson Creek ridge. From north to south it extends from Kauffman saddle into section 17. There are an estimated 300 infested trees in this area, the heaviest portion of which lies 60 chains west of Kauffman saddle near Butte Creek, where a group of 12

infested trees were found. Although other infested trees were found scattered along this side of the drainage, only the one group was seen and it is possible that the infestation is localized, to a large extent, to a very small area.

Ownership of the two sections is divided between the four owners: Milwaukee Land Company, 720 acres; Potlatch Forests, 400 acres; State of Idaho, 80 acres; and the Northern Pacific Railroad Company, 80 acres.

A very thorough survey of the drainage should be made again in 1942 to determine the trend of this infestation.

Canal Gulch Area	1,000 acres
Infested trees per acre	.07
Percent of stand killed	.3
Infested trees on area	70

Several years ago a survey made in the C.T.P.A. included a small area along the eastern side of the ridge between Canal Gulch and Quartz Creek, just north of Pierce, Idaho.

The area is stocked with an old stand of white pine and had suffered a considerable loss from insects. A few infested trees were found, but the infestation was not serious. However, a check of the area was again made during 1941. Only a very light infestation was found.

CONCLUSIONS

To sum up the status of insect infestations in the timber stands of the Clearwater National Forest and the C.T.P.A. - loss from the mountain pine beetle is as a whole quite light. Some areas are infested to an above normal status, and it would be advisable to examine them again in 1942. The Sheep Mountain unit on the national forest, with an infestation of .25 of an infested tree per acre, could possibly show a serious increase in the coming season. The area of infestation in the lodgepole pine in the Orogrande drainage must be regarded as a potential threat to the white pine and should be checked annually as long as it continues near its present rate of kill.

On the C.T.P.A., the only area that is thought to be in a status requiring consideration in 1942 is the Butte Creek drainage, where an area of infestation on approximately 800 acres could become a serious epidemic and spread into the adjacent stands of the Butte and Thompson drainages.